REDUCING RISK THROUGH PSM PERSPECTIVE

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3 Key Takeaways

- Identifying the hazards
- Reduce your risk
- Improve Safety Management/ Culture

PSM focuses on Catastrophic Accidents

0 Accidents

“Keep you safe!”

OSHA CFR 29 1910.119 - PSM

(c) Employee Participation
(d) Process Safety Information
(e) Process Hazards Analysis
(f) Operating Procedures
(g) Training
(h) Contractors
(i) Pre-Startup Review
(j) Mechanical Integrity
(k) Hot Work Permit
(l) Management of Change
(m) Incident Investigation
(n) Emergency Response
(o) Compliance Audits
(p) Trade Secrets

What is the greatest risk you face each day?

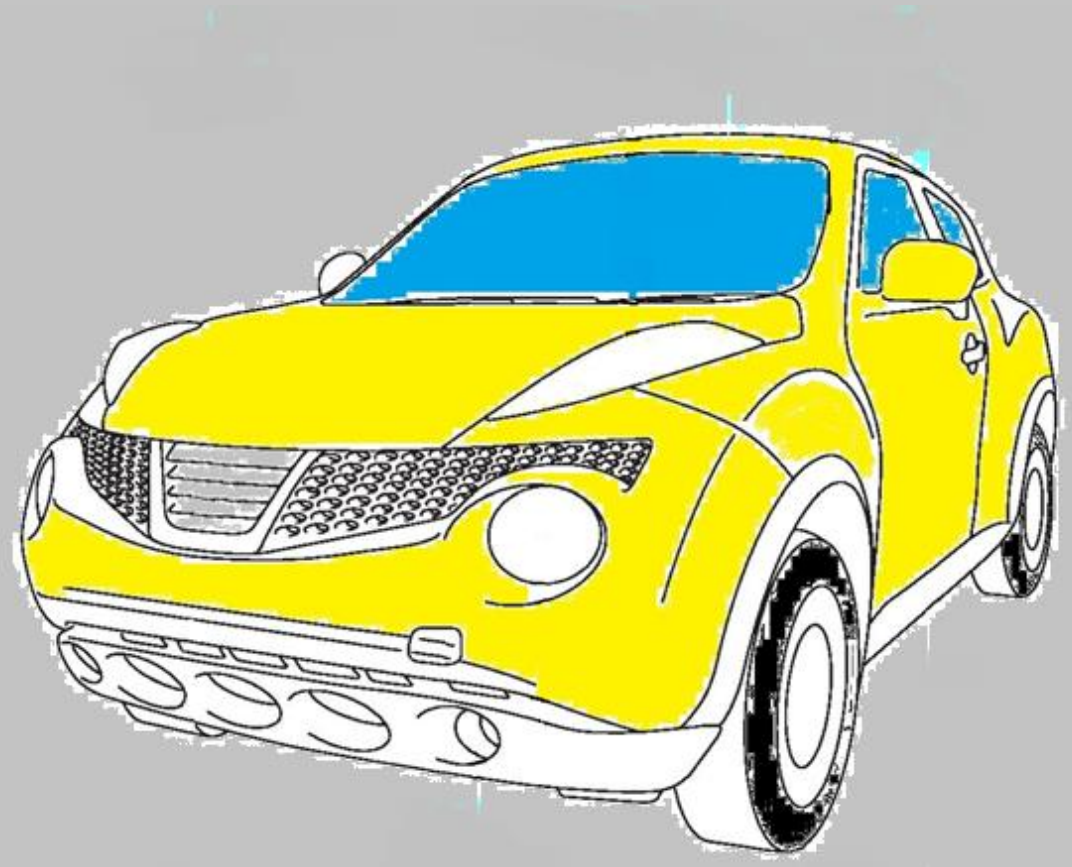
Vehicle Accidents – 40%

Falls, slips, trips – 17%

Contact with objects – 14%

PSM Related – 12%

Hazards of the Process



High speed

Mechanical Malfunctions

Human Error

Human Factors

Evaluating the hazards

- Hazard is different from risk
- Risk includes the probability that a hazard will happen

Evaluating the hazards

- Assessment needs to include mitigation
- Take it to the worst case:
  - "It can't happen here" is not true if you can say "it can happen somewhere"

The most dangerous phrase in PSM is "we have always done it this way"

Encyclopedia of Hazards

- If you have identified the hazard, you can implement safeguards
- The hazard study should list all the ways the system can go wrong

Not knowing what you don't know gets you in trouble

EXAMPLES

- Injuries from Crashes
  - Led to seat belts, air bags
- Sliding out of Control
  - Led to anti-lock brakes
- Unintended Acceleration

CAPTURE INDUSTRY INCIDENTS

- Like an encyclopedia, the PHA contains the learnings from the past

- You shouldn’t have to experience a hazardous situation to learn from it or respond to it

is a text message

WORTH

someone's

L I F E ?

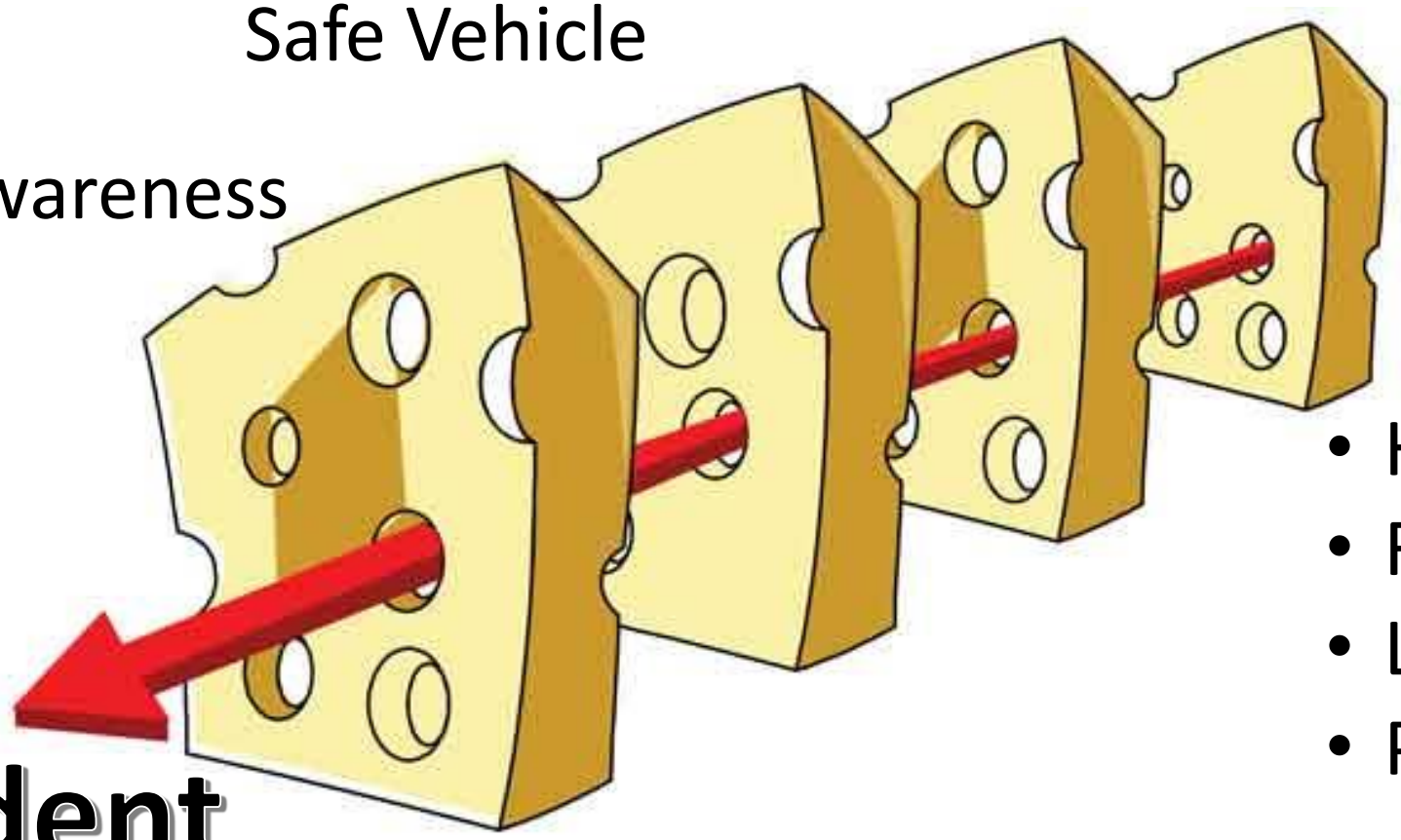
Lining Up Risks!!!

Safe Road Conditions

Safe Traffic Conditions

Safe Vehicle

Driver Awareness

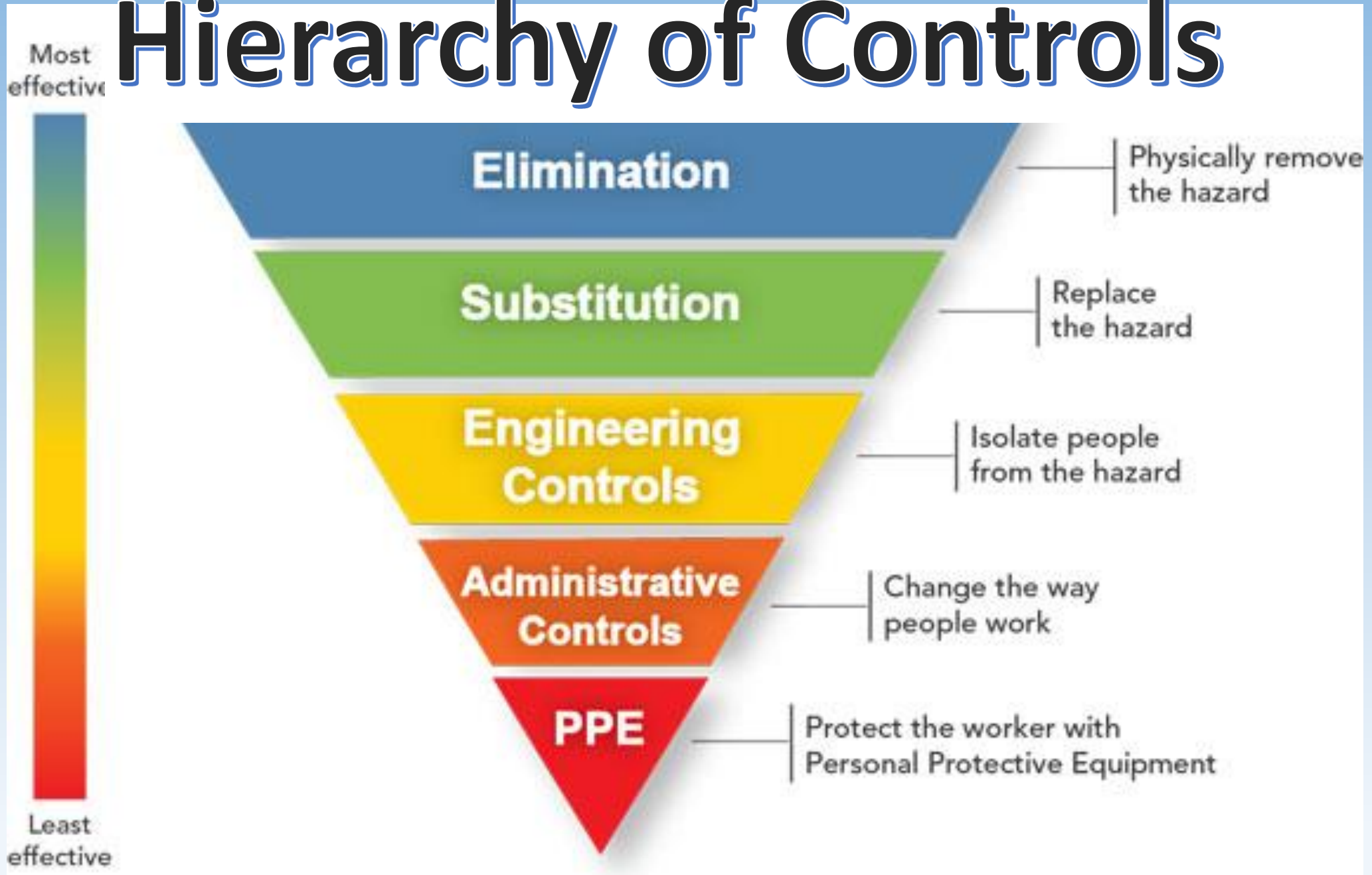


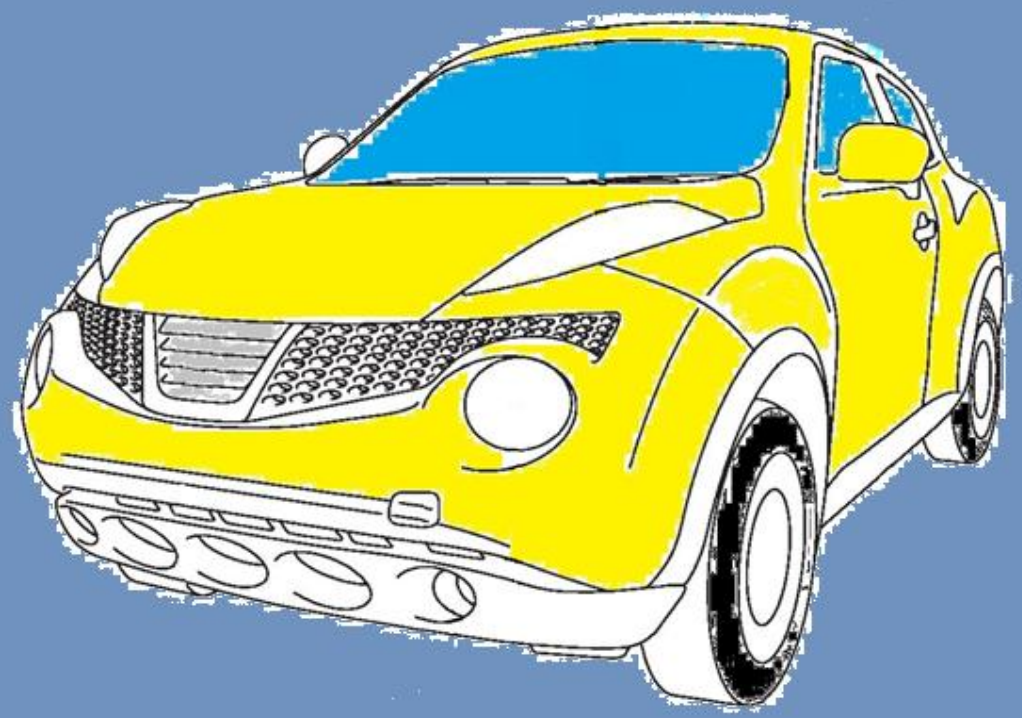
- High-Volume Traffic
- Raining
- Low Tire Tread
- Phone Conversation

Accident


Fatality
Recordable Injury
First-aid Injury
Near Miss Incidents
Unsafe Acts

Hierarchy of Controls





Training

To Get Kansas Driver License

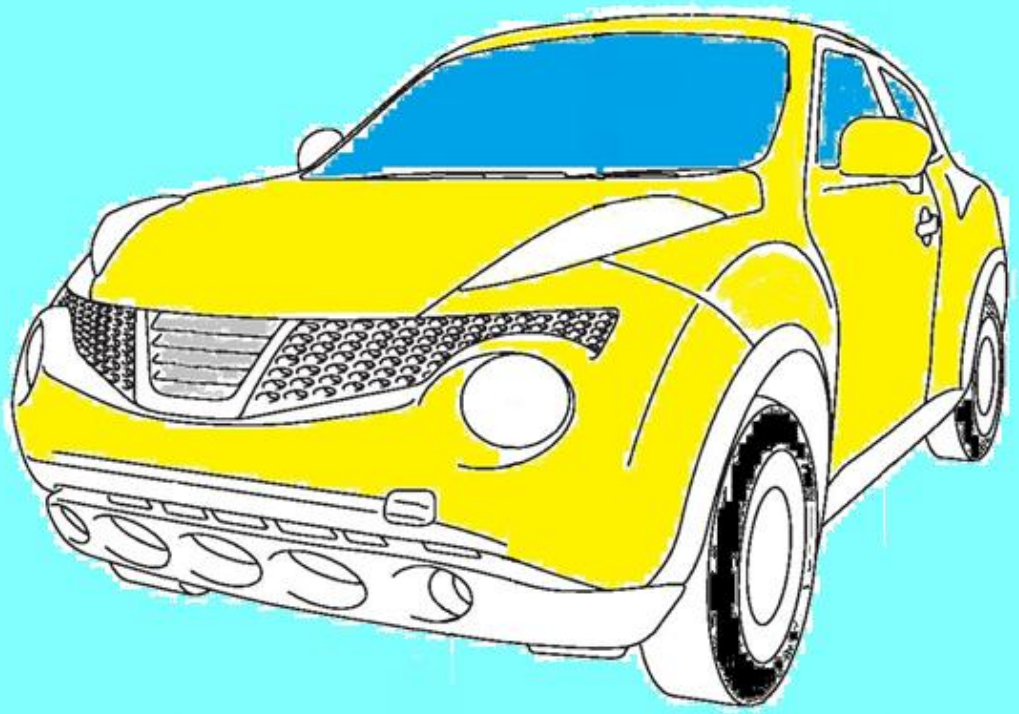
Tests required: **Vision**
Written
Drive
***OR* certificate of completion from driver education.**

Instruction permit required: Yes - held 1 year

50 hour affidavit required


SLOW


70
90
50
110
Information
Rear Seat Reminder
Look in Rear Seat
30
130
MPH
150
10
Dismiss
170
CAL

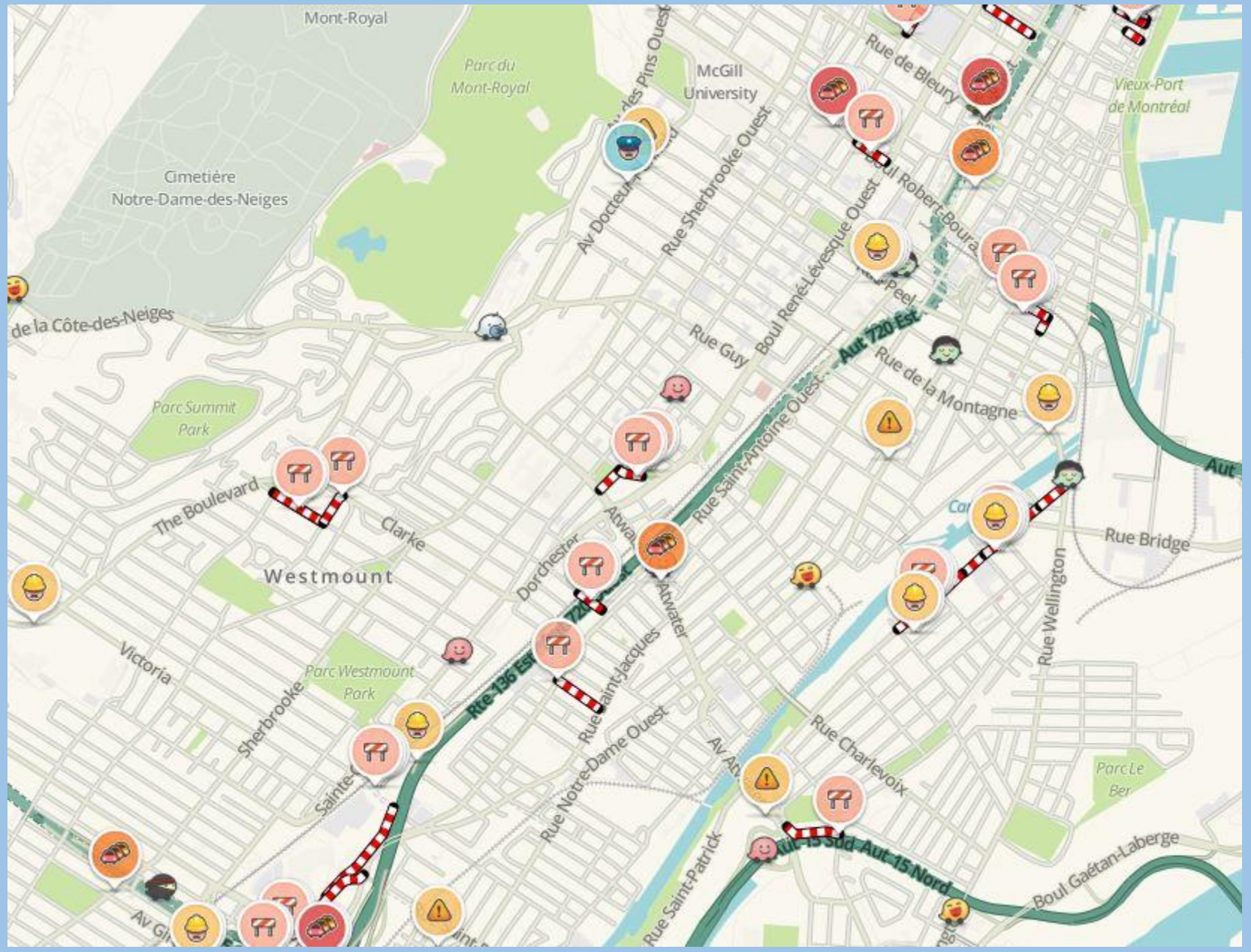


Emergency Operations

OF THE POTENTIAL RESPONSES TO MY BRAKES' FAILURE, I DID NOT CHOOSE THE BEST.

5 Rules of Defensive Driving

1. Look up ahead
2. Be aware of blind spots
3. Slow down at all intersections
4. Maintain a safe following distance
5. Minimize all distractions


Mont-Royal
Parc du Mont-Royal
McGill University
Vieux-Port de Montréal
Cimetière Notre-Dame-des-Neiges
Rue de Bleury
Rue Sherbrooke Ouest
Boul René-Lévesque Ouest
Boul Robert-Bourassa
Peel
Rue Guy
Aut 720 Est
Rue de la Montagne
Parc Summit Park
The Boulevard
Clarke
Westmount
Rue Saint-Antoine Ouest
Dorchester
Atwater
Rue Bridge
Rue Wellington
Victoria
Sherbrooke
Parc Westmount Park
Rte-136 Est
Rue Saint-Jacques
Rue Notre-Dame Ouest
Rue Charlevoix
Parc Le Ber
Rue Saint-Patrick
Aut-15 Sud
Aut-15 Nord
Boul Gaétan-Laberge

Management of Change

New Technology

- Highly integrated systems
- Spurious trips
- More automated

Normal accidents are a part of our relationship with technology. They are going to be a part of our relationship with driverless cars. That doesn't mean driverless cars are bad. Again, so far statistics show they're safer than humans. But complex systems will never be safe. You can't engineer away the risk. And that fact needs to be part of the conversation.

Maggie Koerth-Baker, July 1, 2016

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